CLAIMS

1.   A computer, comprising:

a memory; and

a data structure stored in the memory, the data structure including:

a definition of a first element, the definition of the first element including an element value field;

a key identifier to identify a key value field to be used as a key in a data store.

2.   A computer according to claim 1, wherein:

the definition of the first element includes the key identifier as a property of the first element; and

the key identifier identifies the element value field as the key value field.

3.   A computer according to claim 1, wherein:

the definition of the first element includes a definition of a first attribute of the first element, the definition of the first attribute including the key identifier; and

the key identifier identifies the element value field as the key value field.

4.   A computer according to claim 1, wherein the definition of the first element includes a definition of a second attribute, the definition of the second attribute including an attribute value field.

5.   A computer according to claim 4, wherein:

the definition of the second attribute includes the key identifier as a property of the second attribute; and

the key identifier identifies the attribute value field as the key value field.

6.   A computer according to claim 4, wherein:

the definition of the first element further includes a definition of a third attribute of the first element, the definition of the third attribute including the key identifier; and

the key identifier identifies the attribute value field of the second attribute as the key value field.

7.   A computer according to claim 1, further comprising:

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a second element; and

a tree structure including the first element and the second element.

8. A computer according to claim 1, wherein the key identifier identifies the key

5   value field as one of a primary key, a secondary key, and a foreign key for the data store.

9. A computer according to claim 8, wherein:

the key identifier identifies the key value field as a foreign key for the data store; and

the key identifier references a second data store.

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10. A computer according to claim 1, wherein the schema is an eXtensible

Markup Language (XML) schema.

11. A computer system, comprising:

15   a data store to store a first document; and

a first schema applicable to the first document, the first schema including:

a definition of a first element, the definition of the first element including an element

value field;

a first key identifier to identify a first key value field in the first document to be used

20   as a key in a data store.

12. A system according to claim 11, wherein:

the definition of the first element includes the first key identifier as a property of the

first element; and

25   the first key identifier identifies an element value field of the first element as the first

key value field.

13. A system according to claim 11, wherein:

the definition of the first element includes a definition of a first attribute, the

30   definition of the first attribute including the first key identifier; and

the first key identifier identifies an element value field of the first element as the first

key value field.

14.   A system according to claim 11, wherein the definition of the first element includes a definition of a second attribute, the definition of the second attribute including an attribute value field.

5   15.   A system according to claim 14, wherein:

the definition of the second attribute includes the first key identifier as a property of the second attribute; and

the first key identifier identifies the attribute value field as the first key value field.

10   16.   A system according to claim 14, wherein:

the definition of the first element further includes a definition of a third attribute, the definition of the third attribute including the first key identifier; and

the first key identifier identifies the attribute value field as the first key value field.

15   17.   A system according to claim 11, wherein:

the data store is operative to store a second document; and

the system further comprises a second schema applicable to the second document, the second schema including:

a definition of a second element, the definition of the second element including an

20   element value field;

a second key identifier to identify a second key value field in the second document to be used as a key in a data store.

18.   A system according to claim 17, wherein:

25   the first schema includes a first identifier for the first key value field;

the second schema includes a second identifier for the second key value field; and

the first identifier and the second identifier are the same identifier.

19.   A system according to claim 11, wherein the data store is a Lightweight

30   Directory Access Protocol (LDAP) data store.

20.   A system according to claim 11, further comprising a parser to parse the schema.

21.   A system according to claim 20, further comprising:

the parser is operative to identify the first key value field in the schema; and

a loader to load a value from the first key value field in the first document.

5   22.   A system according to claim 21, wherein the data store further includes an

index associated with the first document, the index storing a copy of the value from the first

key value field in the first document. ᕽ

23.   A system according to claim 22, wherein the index is in a native format of the

10   data store.

24.   A system according to claim 21, wherein:

the schema includes a definition of at least one of a second element and a fourth

attribute;

15   the parser is operative to identify the second element or the fourth attribute;

the loader is operative to load a second value from the second element or the fourth

attribute in the first document; and

the data store further includes a field to store the second value in a native format of

the data store.

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25.   A system according to claim 20, wherein:

the parser is operative to parse the schema into objects; and

the system further comprises a definer to define a structure for the data store based on

the objects.

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26.   A system according to claim 11, wherein:

the first document is an eXtensible Markup Language (XML) document; and

the first schema is an XML schema.

30   27.   A method for adding a document to a data store in a computer, comprising:

accessing a schema for the document;

locating a key value field in the document defined in the schema as a key;

loading a value from the key value field;

storing the value in the data store; and

storing the document in the data store.

28.	A method according to claim 27, further comprising indexing the document in the data store using the value.

29.	A method according to claim 27, wherein identifying a key value field includes:
	locating an element defined in the schema as the key; and
	selecting an element value field for the element as the key value field.

30.	A method according to claim 29, wherein locating an element includes locating the element based on a property of the element identifying the element as the key.

31.	A method according to claim 29, wherein locating an element includes locating the element based on an attribute of the element identifying the element as the key.

32.	A method according to claim 27, wherein identifying a key value field includes:
	locating a first attribute of an element defined in the schema as the key; and
	selecting an attribute value field for the first attribute as the key value field.

33.	A method according to claim 32, wherein locating a first attribute includes locating the first attribute based on a property of the first attribute identifying the first attribute as the key.

34.	A method according to claim 32, wherein locating an attribute includes locating the first attribute based on a second attribute of the element identifying the first attribute as the key.

35.	A method according to claim 27, wherein storing the document includes:
	parsing the document into objects according to the schema;
	loading values for each object in the document; and
	storing the values in the data store.

36.   A method according to claim 35, wherein storing the values includes storing the values in the data store in a native format of the data store.

37.   A method according to claim 27, wherein:

the document is an eXtensible Markup Language (XML) document; and

the schema is an XML schema.

38.   A method for defining a data store in a computer, comprising:

accessing a schema;

locating an object defined in the schema as a key;

defining a first data structure in the data store for the object;

identifying the first data structure in the data store as a key data structure; and

defining a second data structure in the data store for a document conforming to the schema.

39.   A method according to claim 38, wherein defining a first data structure includes defining the first data structure in the data store for the object in a native format of the data store.

40.   A method according to claim 38, wherein defining a second data structure includes:

parsing the schema into objects; and

defining a data structure in the data store for each object.

41.   A method according to claim 40, wherein defining a data structure in the data store for each object includes defining the data structure in the data store for each object in a native format of the data store.

42.   A method according to claim 38, wherein:

the document is an eXtensible Markup Language (XML) document; and

the schema is an XML schema.

43.   A method for defining a schema in a computer, comprising:

defining a first element in the schema, the first element including an element value field; and

identifying a key value field in the schema to be used as a key in a data store.

44.   A method according to claim 43, wherein:

defining a first element includes assigning a property to the first element as the key; and

identifying a key value field includes identifying the element value field as the key value field.

45.   A method according to claim 43, wherein:

defining a first element includes defining a first attribute of the first element, the first attribute identifying the first element as the key; and

identifying a key value field includes identifying the element value field as the key value field.

46.   A method according to claim 43, wherein defining a first element includes defining a second attribute for the first element, the second attribute including an attribute value field.

47.   A method according to claim 46, wherein:

defining a second attribute includes assigning a property to the second attribute as the key; and

identifying a key value field includes identifying the attribute value field as the key value field.

48.   A method according to claim 46, wherein:

defining a second attribute includes defining a third attribute of the first element, the third attribute identifying the second attribute as the key; and

identifying a key value field includes identifying the attribute value field of the second attribute as the key value field.

49.   A method according to claim 43, wherein the schema is an XML schema.

50.   A computer-readable medium containing a program to add a document to a data store, comprising:

software to access a schema for the document;

software to locate a key value field in the document defined in the schema as a key;

software to load a value from the key value field;

software to store the value in the data store;

software to store the document in the data store; and

software to index the document in the data store using the value.

51.   A computer-readable medium according to claim 50, wherein the software to identify a key value field includes:

software to locate an element defined in the schema as the key; and

software to select an element value field for the element as the key value field.

52.   A computer-readable medium according to claim 50, wherein the software to identify a key value field includes:

software to locate a first attribute of an element defined in the schema as the key; and

software to select an attribute value field for the first attribute as the key value field.

53.   A computer-readable medium according to claim 50, wherein the software to store the document includes:

software to parse the document into objects according to the schema;

software to load values for each object in the document; and

software to store the values in the data store.

54.   A computer-readable medium according to claim 50, wherein:

the document is an eXtensible Markup Language (XML) document; and

the schema is an XML schema.

55.   A computer-readable medium containing a program to define a data store, comprising:

software to access a schema;

software to locate an object defined in the schema as a key;

software to define a first data structure in the data store for the object;

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software to identify the first data structure in the data store as a key data structure; and

software to define a second data structure in the data store for a document conforming to the schema.

56. A computer-readable medium according to claim 55, wherein the software to define a second data structure includes:

software to parse the schema into objects; and

software to define a data structure in the data store for each object.

57. A computer-readable medium according to claim 55, wherein:

the document is an eXtensible Markup Language (XML) document; and

the schema is an XML schema.

58. A computer-readable medium containing a program to define a schema, comprising:

software to define a first element in the schema, the first element including an element value field; and

software to identify a key value field in the schema to be used as a key in a data store.

59. A computer-readable medium according to claim 58, wherein:

the software to define a first element includes software to assign a property to the first element as the key; and

the software to identify a key value field includes software to identify the element value field as the key value field.

60. A computer-readable medium according to claim 58, wherein:

the software to define a first element includes software to define a first attribute of the first element, the first attribute identifying the first element as the key; and

the software to identify a key value field includes software to identify the element value field as the key value field.

61. A computer-readable medium according to claim 58, wherein the software to define a first element includes software to define a second attribute for the first element, the second attribute including an attribute value field.

62. A computer-readable medium according to claim 61, wherein:

the software to define a second attribute includes software to assign a property to the second attribute as the key; and

5 the software to identify a key value field includes software to identify the attribute value field as the key value field.

63. A computer-readable medium according to claim 61, wherein:

the software to define a second attribute includes software to define a third attribute of

10 the first element, the third attribute identifying the second attribute as the key; and

the software to identify a key value field includes software to identify the attribute value field of the second attribute as the key value field.

64. A computer-readable medium according to claim 58, wherein the schema is an

15 eXtensible Markup Language (XML) schema.